



## 25 TEXAS ADMINISTRATIVE CODE

### §289.251

#### Exemptions, General Licenses, and General License Acknowledgements

#### Texas Regulations for Control of Radiation

(effective October 1, 1995)

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(October 2000)

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(October 2000)

## TEXAS REGISTER FORMAT EXPLANATION

The following example is the outline format used for all agency rules. This explanation will help you locate the different references stated throughout the rule:

§289.xxx = sections are the titles

289.252 Licensing of Radioactive Material.

(a) = subsections are the lowercase letters in parenthesis

(a) Appendices.

(1) = paragraphs are the numbers in parenthesis

(1) Criteria relating to use of financial tests and parent company...

(A) = subparagraphs are the UPPERCASE letters in parenthesis

(A) Financial test.

(i) = clauses are the *italicized* lowercase roman numerals in parenthesis

(i) To pass the financial test, the parent company...

(J) = subclauses are the *italicized* UPPERCASE roman numerals in parenthesis

(J) The parent company shall have:

(-a-) = items are the lowercase letters with hyphens in parenthesis

(-a-) two of the following...:

(-1-) = subitems are the numbers with hyphens in parenthesis

(-1-) a ratio of total liabilities to...;

### FOR EXAMPLE:

When the rule states “paragraph (1) of this subsection”, the rule is referring to paragraph “(1)” within subsection “(a).”

When the rule states “subsection (d) of this section”, the rule is referring to subsection “(d)” within the section, for example, §289.252.

**WHERE CAN THE FORMS REFERENCED  
WITHIN THE RULE BE FOUND?**

Forms that are referenced in this rule can be downloaded from  
the Bureau of Radiation Control web site at:

[www.tdh.state.tx.us/ech/rad/pages/brc.htm](http://www.tdh.state.tx.us/ech/rad/pages/brc.htm)

Or call (512) 834-6688 to request a copy of the forms

## 25 TEXAS ADMINISTRATIVE CODE

### §289.251 Exemptions, General Licenses, and General License Acknowledgements.

(a) Purpose. This section provides for exemptions to licensing requirements, general licensing of radioactive material, and acknowledgement of general licenses.

(b) **Scope.** Except as otherwise authorized, no person shall receive, possess, use, transfer, own, or acquire radioactive material except as authorized in a general license or general license acknowledgement issued in accordance with this section, or in a specific license issued in accordance with §289.252 of this title (relating to Licensing of Radioactive Material), §289.254 of this title (relating to Licensing of Radioactive Waste Processing and Storage Facilities), §289.255 of this title (relating to Radiation Safety Requirements and Licensing and Registration Procedures for Industrial Radiography), §289.256 of this title (relating to Medical and Veterinary Use of Radioactive Material), §289.258 of this title (relating to Licensing and Radiation Safety Requirements for Irradiators), §289.259 of this title (relating to Licensing of Naturally Occurring Radioactive Material (NORM)), or §289.260 of this title (relating to Licensing of Uranium Recovery and Byproduct Material Disposal Facilities).

(c) Definitions. The following **words and** terms when used in this **section** shall have the following meanings unless the **context** clearly indicates otherwise.

(1) General license - An authorization granted in accordance with this section. General licenses provided in this section are effective without the filing of applications with the agency or the issuance of licensing documents to the particular persons. The general licensee is subject to all other applicable portions of this chapter and any limitations of the general license.

(2) General license acknowledgement - A written recognition of a general license issued in accordance with this section. General license acknowledgements require the submission of an application to the agency and the issuance of a written acknowledgement of a general license granted in accordance with this section. The holder of a general license acknowledgement is subject to all other applicable portions of this chapter as well as any limitations specified in the acknowledgement document.

(d) Exemptions for source material.

(1) Any person is exempt from this section and §289.252 of this title if that person receives, possesses, uses, or transfers source material in any chemical mixture, compound, solution, or alloy in which the source material is by weight less than 1/20 of 1.0% (0.05%) of the mixture, compound, solution, or alloy.

§289.251(d)(2)

(2) Any person is exempt from this section and §289.252 of this title if that person receives, possesses, uses, or transfers unrefined and unprocessed ore containing source material; provided that, except as authorized in a specific license, such person shall not refine or process such ore. This exemption does not apply to the mining of ore containing source material.

(3) Any person is exempt from this section and §289.252 of this title if that person receives, possesses, uses, or transfers:

(A) any quantities of thorium contained in:

(i) incandescent gas mantles;

(ii) vacuum tubes;

(iii) welding rods;

(iv) electric lamps for illuminating purposes provided that each lamp does not contain more than 50 milligrams (mg) of thorium;

(v) germicidal lamps, sunlamps, and lamps for outdoor or industrial lighting provided that each lamp does not contain more than two grams of thorium;

(vi) rare earth metals and compounds, mixtures, and products containing not more than 0.25% by weight thorium, uranium, or any combination of these; or

(vii) personnel neutron dosimeters, provided that each dosimeter does not contain more than 50 mg of thorium;

(B) source material contained in the following products:

(i) glazed ceramics, for example tableware, provided that the glaze contains not more than 20% by weight source material;

(ii) glassware containing not more than 10% by weight source material, but not including commercially manufactured glass brick, pane glass, ceramic tile, or other glass or ceramic used in construction;

(iii) glass enamel or glass enamel frit containing not more than 10% by weight source material imported or ordered for importation into the United States, or initially distributed by manufacturers in the United States, before July 25, 1983; or

§289.251(d)(3)(B)(iv)

(iv) piezoelectric ceramic containing not more than 2.0% by weight source material;

(C) photographic film, negatives, and prints containing uranium or thorium;

(D) any finished product or part fabricated of, or containing, metal-thorium alloys, provided that the thorium content of the alloy does not exceed 4% by weight and that the exemption contained in this subparagraph shall not be deemed to authorize the chemical, physical, or metallurgical treatment or processing of any such product or part;

(E) depleted uranium contained in counterweights installed in aircraft, rockets, projectiles, and missiles, or stored or handled in connection with installation or removal of such counterweights, provided that:

(i) the counterweights are manufactured in accordance with a specific license issued by the **United States Nuclear Regulatory Commission (NRC)** authorizing distribution by the licensee in accordance with **Title 10**, Code of Federal Regulations (CFR), Part 40;

(ii) each counterweight has been impressed with the following legend clearly legible through any plating or other covering: "DEPLETED URANIUM" (The requirements specified in this clause need not be met by counterweights manufactured prior to December 31, 1969, provided that such counterweights are impressed with the legend, "CAUTION - RADIOACTIVE MATERIAL - URANIUM," as previously required by this chapter);

(iii) each counterweight is durably and legibly labeled or marked with the identification of the manufacturer and the statement: "UNAUTHORIZED ALTERATIONS PROHIBITED" (The requirements specified in this clause need not be met by counterweights manufactured prior to December 31, 1969, provided that such counterweights are impressed with the legend, "CAUTION - RADIOACTIVE MATERIAL - URANIUM," as previously required by this chapter); and

(iv) the exemption contained in this subparagraph shall not be deemed to authorize the chemical, physical, or metallurgical treatment or processing of any such counterweights other than repair or restoration of any plating, covering, or labeling;

(F) depleted uranium used as shielding constituting part of any shipping container, provided that:

§289.251(d)(3)(F)(i)

(i) the shipping container is conspicuously and legibly impressed with the legend "CAUTION - RADIOACTIVE SHIELDING - URANIUM;" and

(ii) the uranium metal is encased in a one-eighth inch minimum wall thickness of mild steel or equally fire resistant material;

(G) thorium contained in finished optical lenses, provided that each lens does not contain more than 30% by weight of thorium, and that the exemption contained in this subparagraph shall not be deemed to authorize either:

(i) the shaping, grinding, or polishing of such lens or manufacturing processes other than the assembly of such lens into optical systems and devices without any alteration of the lens; or

(ii) the receipt, possession, use, or transfer of thorium contained in contact lenses, or in spectacles, or in eyepieces in binoculars or in other optical instruments;

(H) uranium contained in detector heads for use in fire detection units, provided that each detector head contains not more than 0.005 microcurie (FCi) of uranium; or

(I) thorium contained in any finished aircraft engine part containing nickel-thoria alloy, provided that:

(i) the thorium is dispersed in the nickel-thoria alloy in the form of finely divided thoria (thorium dioxide); and

(ii) the thorium content in the nickel-thoria alloy does not exceed 4.0% by weight.

(4) The exemptions in subsection (d)(3) of this section do not authorize the manufacture of any of the products described.

(e) Exemptions for radioactive material other than source material.

(1) Exempt concentrations.

(A) Except as provided in subparagraph (B) of this paragraph, any person is exempt from this section and §289.252 of this title if that person receives, possesses, uses, transfers, or acquires products or materials containing radioactive material in concentrations not in excess of those listed in subsection (q)(1) of this section.



§289.251(e)(1)(B)

(B) No person may introduce radioactive material into a product or material, including waste, knowing or having reason to believe that it will be transferred to persons exempt in accordance with subparagraph (A) of this paragraph or equivalent regulations of the **NRC**, any agreement state, or any licensing state, except in accordance with a specific license issued in accordance with §289.252(i) of this title or the general license provided in §289.252(ee) of this title.

(2) Exempt quantities.

(A) Except as provided in subparagraph (C) of this paragraph, any person is exempt from these rules if that person receives, possesses, uses, transfers, or acquires radioactive material in individual quantities, each of which does not exceed the applicable quantity set forth in subsection (q)(2) of this section.

(B) Any person who possesses radioactive material received or acquired, prior to September 25, 1971, in accordance with the general license provided in subsection (h)(1)(B) of this section is exempt from the requirements for a license set forth in §289.252 of this title if that person possesses, uses, or transfers such radioactive material.

(C) This paragraph does not authorize the production, packaging, or repackaging of radioactive material for purposes of commercial distribution, or the incorporation of radioactive material into products intended for commercial distribution.

(D) No person may, for purposes of commercial distribution, transfer radioactive material in quantities greater than the individual quantities set forth in subsection (q)(2) of this section, knowing or having reason to believe that such quantities of radioactive material will be transferred to persons exempt in accordance with this paragraph or equivalent regulations of the **NRC**, any agreement state, or any licensing state, except in accordance with a specific license issued by the **NRC** in accordance with Title 10, CFR, §32.18 or by the agency in accordance with §289.252(j) of this title, which states that the radioactive material may be transferred by the licensee to persons exempt in accordance with this paragraph or the equivalent regulations of the **NRC**, any agreement state, or any licensing state.

(E) The schedule of quantities set forth in subsection (q)(2) of this section applies only to radioactive materials distributed as exempt quantities in accordance with a specific license issued by the agency, another licensing state, or the commission. Subsection (q)(2) of this section does not apply to radioactive materials that have decayed from quantities not originally exempt and does not make such material, or the sources or devices in which the material is contained, exempt from the licensing requirements in this section or §289.252 of this title.

§289.251(e)(3)

(3) Exempt items.

(A) Certain items containing radioactive material.

(i) Except for persons who apply radioactive material to, or persons who incorporate radioactive material into the following products, any person is exempt from this chapter if that person receives, possesses, uses, transfers, or acquires the following products:

(j) timepieces, hands, or dials containing not more than the following specified quantities of radioactive material and not exceeding the following specified levels of radiation:

(-a-) 25 millicuries (mCi) of tritium per timepiece;

(-b-) 5 mCi of tritium per hand;

(-c-) 15 mCi of tritium per dial (bezels when used shall be considered as part of the dial);

(-d-) 100 FCi of promethium-147 per watch or 200 FCi of promethium-147 per any other timepiece;

(-e-) 20 FCi of promethium-147 per watch hand or 40 FCi of promethium-147 per other timepiece hand;

(-f-) 60 FCi of promethium-147 per watch dial or 120 FCi of promethium-147 per other timepiece dial (bezels when used shall be considered as part of the dial);

(-g-) the levels of radiation from hands and dials containing promethium-147 will not exceed, when measured through 50 milligrams per square centimeter (mg/cm<sup>2</sup>) of absorber:

(-1-) for wrist watches, 0.1 millirad per hour (mrad/hr) at 10 centimeters (cm) from any surface;

(-2-) for pocket watches, 0.1 mrad/hr at 1 cm from any surface; and

§289.251(e)(3)(A)(i)(-g-)(-3-)

(-3-) for any other timepiece, 0.2 mrad/hr at 10 cm from any surface; or

(-h-) 1 FCi of radium-226 per timepiece in timepieces, hands, or dials manufactured or initially distributed prior to January 1, 1986;

(II) lock illuminators containing not more than 15 mCi of tritium or not more than 2 mCi of promethium-147 installed in automobile locks. The levels of radiation from each lock illuminator containing promethium-147 will not exceed 1 mrad/hr at 1 cm from any surface when measured through 50 mg/cm<sup>2</sup> of absorber;

(III) balances of precision containing not more than 1 mCi of tritium per balance or not more than 0.5 mCi of tritium per balance part;

(IV) automobile shift quadrants containing not more than 25 mCi of tritium;

(V) marine compasses containing not more than 750 mCi of tritium gas and other marine navigational instruments containing not more than 250 mCi of tritium gas;

(VI) thermostat dials and pointers containing not more than 25 mCi of tritium per thermostat;

(VII) electron tubes, provided that each tube does not contain more than one of the following specified quantities of radioactive material and that the levels of radiation from each electron tube containing byproduct material do not exceed 1 mrad/hr at 1 cm from any surface when measured through 7 mg/cm<sup>2</sup> of absorber (For purposes of this clause, "electron tubes" include spark gap tubes, power tubes, gas tubes including glow lamps, receiving tubes, microwave tubes, indicator tubes, pick-up tubes, radiation detection tubes, and any other completely sealed tube designed to control electrical currents):

(-a-) 150 mCi of tritium per microwave receiver protector tube or 10 mCi of tritium per any other electron tube;

(-b-) 1 FCi of cobalt-60;

(-c-) 5 FCi of nickel-63;

(-d-) 30 FCi of krypton-85;

§289.251(e)(3)(A)(i)( *VIII*)(-e-)

(-e-) 5 FCI of cesium-137; or

(-f-) 30 FCI of promethium-147;

(*VIII*) ionizing radiation measuring instruments containing, for purposes of internal calibration or standardization, a source of radioactive material not exceeding the applicable quantity set forth in subsection (q)(2) of this section or 0.05 FCI of americium-241; or

(*IX*) spark gap irradiators containing not more than 1 FCI of cobalt-60 per spark gap irradiator for use in electrically ignited fuel oil burners having a firing rate of at least 3 gallons per hour.

(*ii*) Authority to transfer possession or control by the manufacturer, processor, or producer of any equipment, device, commodity, or other product containing source material or byproduct material whose subsequent possession, use, transfer, and disposal by all other persons are exempted from regulatory requirements may be obtained only from the United States Nuclear Regulatory Commission, Washington, DC 20555.

(B) Self-luminous products containing tritium, krypton-85, promethium-147, or radium-226.

(*i*) Except for persons who manufacture, process, or produce self-luminous products containing tritium, krypton-85, or promethium-147, any person is exempt from this chapter if that person receives, possesses, uses, transfers, owns, or acquires tritium, krypton-85, or promethium-147 in self-luminous products manufactured, processed, produced, imported, or transferred in accordance with a specific license issued by the NRC in accordance with Title 10, CFR, §32.22, which authorizes the transfer of the product to persons who are exempt from regulatory requirements. The exemption in this subparagraph does not apply to tritium, krypton-85, or promethium-147 used in products for frivolous purposes or in toys or adornments.

(*ii*) Any person is exempt from this chapter if that person receives, possesses, uses, transfers, or owns articles acquired prior to January 1, 1986, each of which contains less than 0.1 FCI of radium-226.

(C) Gas and aerosol detectors containing radioactive material.

(*i*) Except for persons who manufacture, process, or produce gas and aerosol detectors containing radioactive material, any person is exempt from this chapter if that person receives, possesses, uses, transfers, owns, or acquires radioactive material in gas and aerosol detectors designed to protect life or property from fires and airborne hazards provided that:

§289.251(e)(3)(C)(i)(I)

(I) detectors containing radioactive material shall have been manufactured, imported, or transferred in accordance with a specific license issued by the **NRC** in accordance with **Title 10**, CFR, §32.26, or an agreement state or a licensing state in accordance with **§289.252(k)** of this title; and

(II) the specific license issued in accordance with §289.252 of this title authorizes the transfer of the detectors to persons who are exempt from regulatory requirements.

(ii) Authority to transfer possession or control by the manufacturer, processor, or producer of any equipment, device, commodity, or other product containing source material or byproduct material whose subsequent possession, use, transfer, and disposal by all other persons are exempted from regulatory requirements may be obtained only from the United States Nuclear Regulatory Commission, Washington, DC 20555.

(iii) Gas and aerosol detectors previously manufactured and distributed to general licensees in accordance with a specific license issued by an agreement state or a licensing state shall be considered exempt in accordance with clause (i) of this subparagraph, provided that the devices are labeled in accordance with the specific license authorizing distribution of the generally licensed device, and provided further that they meet the requirements of §289.252 of this title.

(D) Resins containing scandium-46 and designed for sand consolidation in oil wells. Any person is exempt from this chapter if that person receives, possesses, uses, transfers, or acquires synthetic plastic resins containing scandium-46, which are designed for sand consolidation in oil wells. Such resins shall have been manufactured or imported in accordance with a specific license issued by the **NRC**, or shall have been manufactured in accordance with the specifications contained in a specific license issued by the agency or any agreement state to the manufacturer of such resins in accordance with licensing requirements equivalent to those in **Title 10**, CFR, §32.16 and §32.17. This exemption does not authorize the manufacture of any resins containing scandium-46.

**(4) Exemption for capsules containing carbon-14 urea for "in vivo" diagnostic use in humans.**

**(A) Except as provided in subparagraphs (B) and (C) of this paragraph, a person is exempt from the requirements of this section and §289.256 of this title (relating to Medical and Veterinary Use of Radioactive Material) provided that such person receives, possesses, uses, transfers, owns, or acquires capsules containing 1FCi (37 kilobecquerels) or less of carbon-14 urea each (allowing for nominal variation that may occur during the manufacturing process), for "in vivo" diagnostic use in humans.**

§289.251(e)(4)(B)

(B) A person desiring to use the capsules for research involving human subjects shall apply for and receive a specific license in accordance with §289.256 of this title.

(C) A person desiring to manufacture, prepare, process, produce, package, repack, or transfer for commercial distribution such capsules shall apply for and receive a specific license in accordance with Title 10, CFR, §32.21.

(D) Nothing in this subsection relieves a person from complying with applicable requirements of the United States Food and Drug Administration (FDA) and other federal and state requirements governing the receipt, administration, and use of drugs.

(f) General licenses. In addition to the requirements of this section, all general licenses, unless otherwise specified, are subject to the requirements of §289.201 of this title (relating to General Provisions for Radioactive Material), §289.202(ww) and (xx) of this title (relating to Standards for Protection Against Radiation from Radioactive Material), §289.204 of this title (relating to Fees for Certificates of Registration, Radioactive Material Licenses, Emergency Planning and Implementation, and Other Regulatory Services), §289.205 of this title (relating to Hearing and Enforcement Procedures), and §289.257 of this title (relating to Packaging and Transportation of Radioactive Material).

(g) General licenses for source material.

(1) A general license is issued authorizing commercial and industrial firms, research, educational and medical institutions, and state and local government agencies to use and transfer not more than 15 pounds of source material at any one time for research, development, educational, commercial, or operational purposes. A person authorized to use or transfer source material, in accordance with this general license, may not possess more than a total of 150 pounds of source material in any one calendar year.

(2) Persons who receive, possess, use, or transfer source material in accordance with the general license in paragraph (1) of this subsection are prohibited from administering source material, or the radiation therefrom, either externally or internally, to humans except as may be authorized by the agency in a specific license.

(3) A general license is issued to own source material without regard to quantity. This general license does not authorize any person to receive, possess, use, or transfer source material.

§289.251(g)(4)

(4) A general license is issued to mine, transport, and transfer ores containing source material without regard to quantity. In addition to the provisions of subsection (f) of this section, persons who mine, transport, and transfer ores containing source material in accordance with this section shall comply with the provisions of §289.202(n), (ff), and (gg) of this title.

(5) A general license is issued to receive, acquire, possess, use, or transfer depleted uranium contained in products or devices for the purpose of providing shielding, including beam shaping and collimation, in accordance with the provisions of subparagraphs (A)-(D) of this paragraph.

(A) The general license in this paragraph applies only to products or devices that have been manufactured either in accordance with a specific license issued by the agency to the manufacturer of the products or devices in accordance with §289.252(s) of this title or in accordance with a specific license issued to the manufacturer by another agreement state or the NRC that authorizes manufacture of the products or devices for distribution to persons generally licensed by another agreement state or the NRC.

(B) Persons who receive, acquire, possess, or use depleted uranium in accordance with the general license in this paragraph shall notify the agency within 30 days after the first receipt of acquisition of such depleted uranium. The general licensee shall furnish the following information and such other information as may be required by the agency:

(i) name and address of the general licensee;

(ii) a statement that the general licensee has developed and will maintain procedures designed to establish physical control over the depleted uranium in accordance with this paragraph and designed to prevent transfer of such depleted uranium in any form, including metal scrap, to persons not authorized to receive the depleted uranium; and

(iii) name and/or title, address, and telephone number of the individual duly authorized to act for and on behalf of the general licensee in supervising the procedures identified in clause (i) of this subparagraph.

(C) The general licensee possessing or using depleted uranium in accordance with the general license in this paragraph shall report in writing to the agency any changes in information furnished by the general licensee. The report shall be submitted within 30 days after the effective date of such change.

(D) A person who receives, acquires, possesses, or uses depleted uranium in accordance with the general license in this paragraph:

§289.251(g)(5)(D)(i)

(i) shall not introduce such depleted uranium, in any form, into a chemical, physical, or metallurgical treatment or process, except a treatment or process for repair or restoration of any plating or other covering of the depleted uranium;

(ii) shall not abandon such depleted uranium;

(iii) shall transfer or dispose of such depleted uranium only in accordance with the provisions of §289.252(cc) of this title. In the case where the transferee receives the depleted uranium in accordance with the general license in this paragraph or equivalent rule of the NRC or an agreement state, the transferor shall furnish the transferee a copy of this paragraph;

(iv) in each calendar quarter, shall report in writing to the agency the name and address of the person receiving the depleted uranium in accordance with such transfer; and

(v) shall not export such depleted uranium except in accordance with a license issued by the NRC in accordance with Title 10, CFR, Part 110.

(E) Any person receiving, acquiring, possessing, using, or transferring depleted uranium in accordance with the general license in this paragraph is exempt from the requirements of §289.202 of this title and §289.203 of this title (relating to Notices, Instructions, and Reports to Workers; Inspections) with respect to the depleted uranium covered by that general license.

(h) General licenses for radioactive material other than source material.

(1) Certain devices and equipment. A general license is issued to transfer, receive, acquire, possess, and use radioactive material incorporated in the devices or equipment specified in the following subparagraphs (A) and (B) of this paragraph that have been manufactured, tested, and labeled by the manufacturer in accordance with a specific license issued to the manufacturer by the NRC authorizing distribution in accordance with this general license or its equivalent. A general license is issued to transfer, receive, acquire, possess, and use radioactive material incorporated in the devices or equipment specified in the following subparagraph (C) of this paragraph that have been manufactured, tested, and labeled by the manufacturer in accordance with a specific license issued to the manufacturer by the NRC, an agreement state, or a licensing state authorizing distribution in accordance with this general license or its equivalent. In addition to the provisions of subsection (f) of this section, this general license is subject to the provisions of subsection (e)(1)(B) of this section and §289.252(cc) of this title:



§289.251(h)(1)(A)

(A) static elimination devices designed for use as static eliminators that contain, as a sealed source or sources, radioactive material totaling not more than 500 FCi of polonium-210 per device;

(B) ion generating tubes designed for ionization of air that contain, as a sealed source or sources, radioactive material totaling not more than 500 FCi of polonium-210 per device or a total of not more than 50 mCi of tritium per device; or

(C) other devices designed and manufactured for the purpose of producing light or an ionized atmosphere. Any person who receives, possesses, uses, or transfers radioactive material in a device in accordance with the general license in this subparagraph shall do the following:

(i) assure that all labels bearing a statement that removal of the label is prohibited, are affixed to the device at the time of receipt, are maintained on the device and, are clearly visible and legible. The general licensee shall comply with all instructions and precautions provided by such labels;

(ii) assure that the device is tested for leakage of radioactive material and proper operation of the "on-off" mechanism and indicator, if any, at no longer than six-month intervals or at such other intervals as specified in the label; however:

(I) devices containing only krypton need not be tested for leakage of radioactive material; and

(II) devices containing only tritium or not more than 100 FCi of other beta and/or gamma emitting material or 10 FCi of alpha emitting material and devices held in storage in the original shipping container prior to initial installation need not be tested for any purpose; provided that each source is tested for leakage within six months prior to being used or transferred;

(iii) assure that the tests required by clause (ii) of this subparagraph and other testing, installation, servicing, and removal from location of installation involving the radioactive materials, shielding or containment, are performed:

(I) in accordance with the instructions provided by the labels;

(II) in accordance with written instructions provided by the manufacturer as specified in §289.252(l)(3) of this title; or

§289.251(h)(1)(C)(iii)(III)

(III) by a person holding a specific license from the agency, the **NRC**, an agreement state, or a licensing state to perform such activities;

(iv) maintain records showing compliance with the requirements of clauses (ii) and (iii) of this subparagraph. The records shall show the test results. The records also shall identify the device tested by manufacturer, model **and** serial number of the device, serial number of the sealed source, **and** show the dates of performance and the names of persons performing testing, installation, servicing, and removal from location of installation, of the radioactive material, its shielding or containment;

(v) upon the occurrence of failure or damage to, or any indication of a possible failure or damage to, the radioactive material shielding or the "on-off" mechanism, or upon the detection of 0.005 **FCi** or more of removable radioactive contamination, immediately suspend operation of the device until it has been repaired by the manufacturer or other person holding a specific license from the agency, the **NRC**, an agreement state, or a licensing state to repair such devices, or disposed of by transfer to a person authorized by a specific license to receive the radioactive material contained in the device and, within 30 days, furnish the agency with a report containing a brief description of the event and the remedial action taken;

(vi) not abandon the device containing radioactive material;

(vii) except as provided in clause (viii) of this subparagraph, transfer or dispose of the device containing radioactive material only by transfer to a specific licensee of the agency, the **NRC**, an agreement state, or a licensing state, whose specific license authorizes the receipt of the device, and within 30 days after transfer of a device to a specific licensee, furnish the agency with a report containing identification of the device by manufacturer's name, model **and** serial number of the device, serial number of the sealed source, and address of the person receiving the device;

(viii) transfer the device to another general license(e) only:

(I) where the device remains in use at a particular location. In such case, the transferor shall give the transferee a copy of this rule and any safety documents identified in the label on the device and, within 30 days of the transfer, report to the agency the manufacturer's name and model number of device transferred, the serial number of the sealed source transferred, the name and address of the transferee, and the name and/or position of an individual who may constitute a point of contact between the agency and the transferee; or

(II) where the device is stored in the original shipping container at its intended location of use prior to initial use by the holder of a general license acknowledgement; and

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(ix) submit the written instructions specified in **clause (iii) (II) of this subparagraph** which shall be followed while performing the testing and shall be maintained for inspection by the agency.

(2) Luminous safety devices for aircraft.

(A) A general license is issued to receive, acquire, possess, and use tritium or promethium-147 contained in luminous safety devices for use in aircraft, provided:

(i) each device contains not more than **10 curies (Ci)** of tritium or **300 mCi** of promethium-147; and

(ii) each device has been manufactured, assembled, or imported in accordance with a specific license issued by the **NRC**, or each device has been manufactured or assembled in accordance with the specifications contained in a specific license issued by the agency or any agreement state to the manufacturer or assembler of such device in accordance with licensing requirements equivalent to those in **Title 10, CFR, §32.53**.

(B) The general license in subparagraph (A) of this paragraph does not authorize the manufacture, assembly, or repair of luminous safety devices containing tritium or promethium-147.

(C) The general license in subparagraph (A) of this paragraph does not authorize the receipt, acquisition, possession, or use of tritium or promethium-147 contained in instrument dials.

(3) Ownership of radioactive material. A general license is issued to own radioactive material without regard to quantity. Notwithstanding any other provisions of this section, this general license does not authorize the manufacture, production, transfer, receipt, possession, or use of radioactive material.

(4) Calibration, stabilization, and reference sources.

(A) A general license is hereby issued to those persons listed below to receive, acquire, possess, use, and transfer, in accordance with the provisions of subparagraphs (B) and (C) of this paragraph, americium-241, plutonium, and/or radium-226, in the form of calibration, stabilization, or reference sources:

(i) any person who holds a specific license issued by the agency that authorizes that person to receive, possess, use, and transfer radioactive material; and

§289.251(h)(4)(A)(ii)

(ii) any person who holds a specific license issued by the **NRC** that authorizes that person to receive, possess, use, and transfer radioactive material.

(B) The general license in subparagraph (A) of this paragraph applies only to calibration, stabilization, or reference sources that have been manufactured in accordance with the specifications contained in a specific license issued to the manufacturer or importer of the sources by the **NRC** in accordance with **Title 10, CFR, §32.57** or **Title 10, CFR, §70.39** or that have been manufactured in accordance with the authorizations contained in a specific license issued to the manufacturer by the agency, any agreement state, or any licensing state, in accordance with licensing requirements equivalent to those contained in 10 CFR §32.57 or 10 CFR §70.39.

(C) **Persons who receive, acquire, possess, use, or transfer one or more calibration or reference sources in accordance with these general licenses:**

(i) shall not possess at any one time, at any one location of storage or use, more than 5 **FCi** each of americium-241, plutonium-238, plutonium-239, and radium-226 in such sources;

(ii) shall not receive, possess, use, or transfer such source unless the source or the storage container bears a label that includes the following statements, or a substantially similar statement that contains the information in the following statements:

(I) option 1, as appropriate:

The receipt, possession, use, and transfer of this source, Model \_\_\_\_\_, Serial No. \_\_\_\_\_, are subject to a general license and the regulations of the **NRC** or of a state with which the **NRC** has entered into an agreement for the exercise of regulatory authority. Do not remove this label.

CAUTION - RADIOACTIVE MATERIAL - THIS SOURCE CONTAINS (AMERICIUM-241) (PLUTONIUM-238) (PLUTONIUM-239)\*. DO NOT TOUCH RADIOACTIVE PORTION OF THIS SOURCE.

\_\_\_\_\_; or  
Name of Manufacturer or Importer

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\* Showing only the name of the appropriate material.

§289.251(h)(4)(C)(ii)(II)

(II) option 2, as appropriate:

The receipt, possession, use, and transfer of this source, Model \_\_\_\_\_, Serial No. \_\_\_\_\_, are subject to a general license and the regulations of any licensing state. Do not remove this label.

CAUTION - RADIOACTIVE MATERIAL - THIS SOURCE CONTAINS RADIUM-226. DO NOT TOUCH RADIOACTIVE PORTION OF THIS SOURCE.

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Name of Manufacturer or Importer

(iii) shall not transfer, abandon, or dispose of such source except by transfer to a person authorized by a specific license from the agency, the **NRC**, an agreement state, or a licensing state to receive the source;

(iv) shall store such source, except when the source is being used, in a closed container designed and constructed to contain americium-241, plutonium-238, plutonium-239, or radium-226; and

(v) shall not use such source for any purpose other than the calibration of radiation detectors or the standardization of other sources.

(D) The general license in subparagraph (A) of this paragraph does not authorize the manufacture of calibration or reference sources containing americium-241, plutonium-238, plutonium-239, or radium-226.

(5) Ice detection devices.

(A) A general license is issued to receive, acquire, possess, use, and transfer strontium-90 contained in ice detection devices, provided each device contains not more than 50 **FCi** of strontium-90 and each device has been manufactured or imported in accordance with a specific license issued by the **NRC** or each device has been manufactured in accordance with the authorizations contained in a specific license issued by the agency or any agreement state to the manufacturer of such device in accordance with licensing requirements equivalent to those in **Title** 10, CFR, §32.61.

(B) Persons who receive, acquire, possess, use, or transfer strontium-90 contained in ice detection devices in accordance with the general license in subparagraph (A) of this paragraph shall do the following:

§289.251(h)(5)(B)(i)

(i) upon occurrence of visually observable damage, such as bend or crack or discoloration from overheating to the device, discontinue use of the device until it has been inspected, tested for leakage, and repaired by a person holding a specific license from the **NRC** or an agreement state to manufacture or service such devices; or dispose of the device by transfer to a person authorized by a specific license from the agency, the **NRC**, or an agreement state; and

(ii) assure that all labels affixed to the device at the time of receipt, and which bear a statement prohibiting removal of the labels, are maintained **on the device**.

(C) The general license in subparagraph (A) of this paragraph does not authorize the manufacture, assembly, disassembly, or repair of strontium-90 in ice detection devices.

(i) Intrastate transportation of radioactive material.

(1) A general license is issued to any common or contract carrier to transport and store radioactive material in the regular course of their carriage for another or storage incident **to transport**, provided the transportation and storage is in accordance with the applicable requirements of **§289.257 of this title** insofar as such **requirements** relate to the loading and storage of packages, placarding of the transporting vehicle, and incident reporting. Any notification of incidents referred to in those requirements shall be filed with the agency and the **United States Department of Transportation (DOT)**. Persons who transport and store radioactive material in accordance with the general license in this paragraph are exempt from the requirements of **§289.202 and §289.203 of this title**.

(2) A general license is issued to any private carrier to transport radioactive material, provided the transportation is in accordance with the applicable requirements, appropriate to the mode of transport, of the DOT insofar as such **requirements** relate to the loading and storage of packages, placarding of the transporting vehicle, and incident reporting. Any notification of incidents referred to in those requirements shall be filed with the agency and the DOT.

(j) General license acknowledgements. In addition to the requirements of this section, all general license acknowledgement holders, unless otherwise specified, are subject to the requirements of **§§289.201, 289.202(ww) and (xx), 289.204, 289.205, and 289.257** of this title.

(k) General license acknowledgements for radioactive material other than source material.

(1) Certain measuring, gauging, and controlling devices.

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(A) A general license is issued to commercial and industrial firms and to research, educational, and medical institutions, individuals in the conduct of their business, and state or local government agencies to receive, acquire, possess, use, or transfer in accordance with the provisions of subparagraphs (B)-(E) of this paragraph, radioactive material, excluding special nuclear material, contained in devices designed and manufactured for the purpose of detecting, measuring, gauging or controlling thickness, density, level, interface location, radiation, leakage, or qualitative or quantitative chemical composition.

(B) The general license in subparagraph (A) of this paragraph applies only to radioactive material contained in devices that have been manufactured and labeled in accordance with the authorizations contained in a specific license issued by the agency in accordance with §289.252(l) of this title or in accordance with the authorizations contained in a specific license issued by the NRC, an agreement state, or a licensing state, which authorizes distribution of devices to persons generally licensed by the NRC, an agreement state, or a licensing state.

(C) Within 30 days following the receipt, acquisition, or possession of radioactive material in a device, except for calibration, stabilization, reference sources, **electron capture detector cells, ion mobility spectrometers, beta backscatter gauges, and static meters** issued in accordance with the general license in subparagraph (A) of this paragraph, the general licensee shall file an application for an acknowledgement on a form prescribed by the agency. The application shall be signed by the individual duly authorized to act for or on behalf of the general licensee. **In filing the application for acknowledgement, the general licensee shall furnish the following information and any other information specifically requested by the agency:**

- (i) name and mailing address of the general licensee;**
- (ii) information about each device to include the manufacturer, model number, serial number of the device and sealed source, and the radioisotope and activity (as indicated on the label);**
- (iii) name and telephone number of the responsible person designated as a representative of the holder of a general licensee acknowledgement in accordance with subparagraph (E)(xii) of this paragraph;**
- (iv) address at which the device(s) are used and/or stored. For portable devices, the address of the primary place of storage;**
- (v) certification by the responsible representative of the general licensee that the information concerning the device(s) has been verified through a physical inventory and checking of label information; and**

§289.251(k)(1)(C)(vi)

(vi) certification by the responsible representative of the general licensee that they are aware of the requirements of this section.

(D) Each application shall be accompanied by BRC Form 252-1, Business Information Form and the applicable fee as required by §289.204 of this title.

(E) Any person who receives, acquires, possesses, uses, or transfers radioactive material in a device in accordance with the general license in subparagraph (A) of this paragraph shall do the following:

(i) assure that all labels bearing a statement that removal of the label is prohibited, are affixed to the device at the time of receipt, are maintained on the device and, are clearly visible and legible. The general licensee shall comply with all instructions and precautions provided by such labels;

(ii) assure that the device is tested for leakage of radioactive material and proper operation of the "on-off" mechanism and indicator, if any, at no longer than six-month intervals or at such other intervals as specified in the label; however:

(I) devices containing only krypton need not be tested for leakage of radioactive material; and

(II) devices containing only tritium or not more than 100 F Ci of other beta and/or gamma emitting material or 10 F Ci of alpha emitting material and devices held in storage in the original shipping container prior to initial installation need not be tested for any purpose, provided that each source is tested for leakage within six months prior to being used or transferred;

(iii) assure that the tests required by clause (ii) of this subparagraph and other testing, installation (removal of the manufacturer's lock and initial alignment of the radiation beam), servicing, and removal from location of installation involving the radioactive materials, shielding or containment, are performed:

(I) in accordance with the instructions provided by the labels;

(II) in accordance with written instructions provided by the manufacturer as specified in §289.252(l)(3) of this title; or

(III) by a person holding a specific license from the agency, the NRC, an agreement state, or a licensing state to perform such activities;



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(iv) maintain records showing compliance with the requirements of clauses (ii) and (iii) of this subparagraph. The records shall show the test results. The records also shall identify the device tested by manufacturer, model and serial number of the device, serial number of the sealed source, and show the dates of performance of and the names of persons performing testing, installation, servicing, and removal from location of installation, of the radioactive material, its shielding or containment;

(v) maintain assignment records for portable or mobile devices for inspection by the agency at the location listed in the general license acknowledgement. These records shall include:

(I) a unique identification (e.g. serial number) of each portable or mobile device;

(II) the location(s) where each portable or mobile device is assigned; and

(III) the date(s) each portable or mobile device is assigned to the location(s) in accordance with subclause (II) of this clause;

(vi) maintain utilization records for each portable or mobile device used at the location(s) in accordance with clause (v)(II) of this subparagraph for inspection by the agency at that location(s);

(vii) have a copy of the appropriate operating and instruction manual at each temporary site for agency inspection;

(viii) upon the occurrence of failure or damage to, or any indication of a possible failure or damage to, the radioactive material shielding or the "on-off" mechanism, or upon the detection of 0.005 F Ci or more of removable radioactive contamination, immediately suspend operation of the device until it has been repaired by the manufacturer or other person holding a specific license from the agency, the NRC, an agreement state, or a licensing state to repair such devices, or disposed of by transfer to a person authorized by a specific license to receive the radioactive material contained in the device and, within 30 days, furnish the agency with a report containing a brief description of the event and the remedial action taken and in the case of detection of 0.005 F Ci or more removable radioactive material or failure of or damage to a source likely to result in contamination of the premises or the environs, a plan for ensuring that the premises and environs are acceptable for unrestricted use. Under these circumstances, the requirements in §289.202(eee) of this title may be applicable, as determined by the agency on a case-by-case basis;

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(ix) not abandon the device containing radioactive material;

(x) except as provided in clause (xi) of this subparagraph, transfer or dispose of the device containing radioactive material only by transfer to a person holding a specific license issued by the agency in accordance with §289.252(l) of this title, or an equivalent specific license issued by the NRC, an agreement state, or a licensing state, whose specific license authorizes the receipt of the device, or as otherwise authorized by the agency in writing, and within 30 days after transfer of a device to a specific licensee, furnish the agency and agreement states with a report containing identification of the device by manufacturer's name, model and serial number of the device and serial number of the sealed source, the name, address, and license number of the person receiving the device (except when the device is temporarily transferred to the specific licensee for repair of the device), and the date of the transfer;

(xi) transfer the device to another general license(e) only:

(I) where the device remains in use at a particular location. In such case, the transferor shall give the transferee a copy of this rule and any safety documents identified in the label on the device and, within 30 days of the transfer, report to the agency the manufacturer's name, the model and serial number of the device transferred, the serial number of the sealed source transferred, the name and address of the transferee, and the name and telephone number of the responsible individual identified by the transferee in accordance with clause (xii) of this subparagraph to have knowledge of and authority to take actions to ensure compliance with the appropriate agency requirements and/or position of an individual who may constitute a point of contact between the agency and the transferee, or

(II) where the device is held in storage by an intermediate person in the original shipping container at its intended location of use prior to initial use by the holder of a general license acknowledgement;

(xii) appoint an individual responsible for having knowledge of the appropriate agency requirements and the authority for taking required actions to comply with appropriate agency requirements. The general licensee, through this appointed individual, shall ensure the day-to-day compliance with appropriate agency requirements. This appointment does not relieve the general licensee of responsibility in this regard;

(xiii) report changes of address (including change in the name of the holder of a general license acknowledgement) to the agency within 30 days of the effective date of the change. If it is a portable device, a report of address change is only required for a change in the device's primary place of storage; and

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(*xiv*) not hold devices that are not in use for longer than two years. If devices with shutters are not being used, the shutter shall be locked in the closed position. The testing required by clause (*ii*) of this subparagraph need not be performed during the period of storage only. However, when devices are put back into service or transferred to another person, and have not been tested within the required test interval, they shall be tested for leakage before use or transfer and the shutter tested before use.

(F) The general license in subparagraph (A) of this paragraph does not authorize the manufacture of devices containing radioactive material.

(G) The written instructions specified in subparagraph (E)(*iii*)(*II*) of this paragraph shall be followed while performing the testing and shall be maintained for inspection by the agency.

(2) Use of radioactive material for certain *in vitro* clinical or laboratory testing, not to include research and development. (The New Drug provisions of the Federal Food, Drug, and Cosmetic Act also govern the availability and use of any specific diagnostic drugs in interstate commerce.)

(A) A general license is issued to any physician, veterinarian, clinical laboratory, or hospital to receive, acquire, possess, transfer, or use, for any of the following stated tests, in accordance with the provisions of subparagraphs (B)-(D) of this paragraph, the following radioactive materials in prepackaged units:

(*i*) iodine-125, in units not exceeding 10 FCi each for use in *in vitro* clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation therefrom, to humans or animals;

(*ii*) iodine-131, in units not exceeding 10 FCi each for use in *in vitro* clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation therefrom, to humans or animals;

(*iii*) carbon-14, in units not exceeding 10 FCi each for use in *in vitro* clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation therefrom, to humans or animals;

(*iv*) hydrogen-3 (tritium), in units not exceeding 50 FCi each for use in *in vitro* clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation therefrom, to humans or animals;

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(v) iron-59, in units not exceeding 20 **FCi** each for use in *in vitro* clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation therefrom, to humans or animals;

(vi) selenium-75, in units not to exceed 10 **FCi** each for use in *in vitro* clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation therefrom, to humans or animals;

(vii) mock iodine-125 reference or calibration sources, in units not exceeding 0.05 **FCi** of iodine-129 and 0.005 **FCi** of americium-241 each for use in *in vitro* clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation therefrom, to humans or animals; or

(viii) cobalt-57, in units not exceeding 10 **FCi** each for use in *in vitro* clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation therefrom, to humans or animals.

(B) No person shall receive, acquire, possess, use, or transfer radioactive material in accordance with the general license in subparagraph (A) of this paragraph until that person has filed an application for an acknowledgement on a form prescribed by the agency and has received from the agency an acknowledgement with an assigned number. The applicant shall furnish the following information and such other information as may be required by the agency:

(i) name and address of the physician, veterinarian, clinical laboratory, or hospital;

(ii) the location of use;

(iii) a statement that the physician, veterinarian, clinical laboratory, or hospital has appropriate radiation measuring instruments to carry out *in vitro* clinical or laboratory tests with radioactive material as authorized in accordance with the general license in subparagraph (A) of this paragraph, and that such tests will be performed only by personnel trained specifically in the use of such instruments and in the handling of the radioactive material;

(iv) name, title, address, and telephone number of the individual duly authorized to act for and on behalf of the general licensee supervising the use of radioactive material authorized by subparagraph (A) of this paragraph; and

(v) **BRC Form 252-1, Business Information Form and the applicable fee as required by §289.204 of this title.**

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(C) A person who receives, acquires, possesses, or uses radioactive material in accordance with the general license in subparagraph (A) of this paragraph shall comply with the following.

(i) The holder of the general license acknowledgement shall not possess at any one time, at any one location of storage or use, a total amount of iodine-125, iodine-131, selenium-75, iron-59, and/or cobalt-57 in excess of 200 F Ci.

(ii) The holder of the general license acknowledgement shall store the radioactive material in the original shipping container or in a container providing equivalent radiation protection and meeting the requirements of §289.202(cc) of this title until used.

(iii) The holder of the general license acknowledgement shall use the radioactive material only for the uses authorized by subparagraph (A) of this paragraph.

(iv) The holder of the general license acknowledgement shall not transfer the radioactive material to a person who is not authorized to receive it in accordance with a specific license issued by the agency, the NRC, any agreement state, or any licensing state, nor transfer the radioactive material in any manner other than in the unopened, labeled shipping container as received from the supplier.

(v) The holder of the general license acknowledgement shall dispose of the mock iodine-125 reference or calibration sources described in subparagraph (A)(vi) of this paragraph as required by §289.202(ff) of this title.

(D) The holder of the general license acknowledgement shall not receive, acquire, possess, or use radioactive material in accordance with the general license in subparagraph (A) of this paragraph:

(i) except as prepackaged units that are labeled in accordance with the provisions of an applicable specific license issued in accordance with §289.252(p) of this title or in accordance with the provisions of a specific license issued by the NRC, any agreement state, or any licensing state that authorizes the manufacture and distribution of iodine-125, iodine-131, carbon-14, hydrogen-3 (tritium), iron-59, selenium-75, cobalt-57, or mock iodine-125 to persons holding general license acknowledgements in accordance with this paragraph or its equivalent; and

(ii) unless one of the statements in the following figures, as appropriate, or a substantially similar statement that contains the information called for in one of the following statements, appears on a label affixed to each prepackaged unit or appears in a leaflet or brochure that accompanies the package:

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(I) option 1, as appropriate:

This radioactive material shall be received, acquired, possessed, and used only by physicians, veterinarians, clinical laboratories, or hospitals and only for *in vitro* clinical or laboratory tests not involving internal or external administration of the material, or the radiation therefrom, to human beings or animals. Its receipt, acquisition, possession, use, and transfer are subject to the regulations and a general license of the **NRC** or of a state with which the **NRC** has entered into an agreement for the exercise of regulatory authority.

\_\_\_\_\_; or  
Name of Manufacturer

(II) option 2, as appropriate:

This radioactive material shall be received, acquired, possessed, and used only by physicians, veterinarians, clinical laboratories, or hospitals and only for *in vitro* clinical or laboratory tests not involving internal or external administration of the material, or the radiation therefrom, to human beings or animals. Its receipt, acquisition, possession, use, and transfer are subject to the rules and a general license of a licensing state.

\_\_\_\_\_  
Name of Manufacturer

(I) Issuance of general license acknowledgements.

(1) Upon a determination that the information submitted by the applicant meets the requirements of the Texas Radiation Control Act (Act) and the rules of the agency, the agency will issue a general license acknowledgement recognizing the proposed activity in such form and containing such conditions and limitations as it deems appropriate or necessary.

(2) The agency may incorporate in any general license acknowledgement at the time of issuance, or thereafter by amendment, additional requirements and conditions governing the receipt, possession, use, transfer, and disposal of radioactive material subject to this section as it deems appropriate or necessary in order to:

(A) minimize danger to **occupational and** public health and safety or the environment;

(B) require such reports and the keeping of such records, and to provide for such inspections of activities in accordance with the license as may be appropriate or necessary; and

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(C) prevent loss or theft of material subject to this section.

(m) Specific terms and conditions.

(1) Each general license acknowledgement issued in accordance with this section shall be subject to the applicable provisions of the Act, now or hereafter in effect, and to the applicable rules and orders of the agency.

(2) Each person holding a general license acknowledgement issued by the agency in accordance with this section shall confine use and possession of the material licensed to the locations and purpose authorized in the general license acknowledgement.

(3) Each holder of a general license acknowledgement shall notify the agency, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy.

(4) The notification in paragraph (3) of this subsection shall include:

(A) the bankruptcy court in which the petition for bankruptcy was filed;  
and

(B) the date of the filing of the petition.

(5) A copy of the "Petition for Bankruptcy" shall be submitted to the agency with the written notification.

(n) Termination of general license acknowledgements.

(1) Each holder of a general license acknowledgement shall notify the agency immediately, in writing, and request termination of the general license acknowledgement when the holder of the general license acknowledgement decides to terminate all activities involving materials specified in the general license acknowledgement.

(2) Each holder of a general license acknowledgement shall, no less than 30 days before vacating or relinquishing possession of control of premises that have been used as a place of storage or use of radioactive material as a result of general licensed activities, notify the agency in writing of intent to vacate and do the following:

(A) terminate use of radioactive material; and

(B) dispose of radioactive material in accordance with this section and/or §289.202(ff) of this title.

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(o) Amendment of general license acknowledgements.

(1) The holder of the general license acknowledgement in accordance with the general license in subsections (k)(1)(A) and (2)(A) of this section shall report in writing to the agency any changes in information furnished by the holder of the general license acknowledgement. The report shall be submitted within 30 days after the effective date of such change.

(2) Applications for amendments of a general license acknowledgement shall be filed in accordance with subsection (k)(1)(C) or (2)(B) of this section, as applicable, and shall specify the respects in which the holder of a general license acknowledgement desires a general license acknowledgement to be amended.

(p) Modification and revocation of general license acknowledgements.

(1) The terms and conditions of all general license acknowledgements shall be subject to amendment, revision, or modification.

(2) A general license acknowledgement may be suspended or revoked by reason of amendments to the Act, or by reason of rules in this chapter and orders issued by the agency.

(3) Any general license acknowledgement may be revoked, suspended, or modified, in whole or in part, for any of the following:

(A) any material false statement in the application or any statement of fact required in accordance with provisions of the Act;

(B) conditions revealed by such application or statement of fact or any report, record, or inspection, or other means that would warrant the agency to refuse to grant a general license acknowledgement on an original application; or

(C) violation of, or failure to observe, any of the terms and conditions of the Act, this chapter, or of the general license acknowledgement, or order of the agency.

(4) Except in cases in which the occupational and public health, interest, or safety requires otherwise, no general license acknowledgement shall be modified, suspended, or revoked unless, prior to the institution of proceedings therefore, facts or conduct that may warrant such action shall have been called to the attention of the holder of the general license acknowledgement in writing and the holder of the general license acknowledgement shall have been afforded an opportunity to demonstrate compliance with all lawful requirements.



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(q) Appendices.

(1) Exempt concentrations.

Element (atomic number)	Isotope	Column I	Column II
		Gas Concentration FCi/ml*	Liquid and Solid Concentration FCi/ml**
Antimony (51)	Sb-122		$3 \times 10^{-4}$
	Sb-124		$2 \times 10^{-4}$
	Sb-125		$1 \times 10^{-3}$
Argon (18)	Ar-37	$1 \times 10^{-3}$	
	Ar-41	$1 \times 10^{-7}$	
Arsenic (33)	As-73		$5 \times 10^{-3}$
	As-74		$5 \times 10^{-4}$
	As-76		$2 \times 10^{-4}$
	As-77		$8 \times 10^{-4}$
Barium (56)	Ba-131		$2 \times 10^{-3}$
	Ba-140		$3 \times 10^{-4}$
Beryllium (4)	Be-7		$2 \times 10^{-2}$
Bismuth (83)	Bi-206		$4 \times 10^{-4}$
Bromine (35)	Br-82	$4 \times 10^{-7}$	$3 \times 10^{-3}$
Cadmium (48)	Cd-109		$2 \times 10^{-3}$
	Cd-115m		$3 \times 10^{-4}$
	Cd-115		$3 \times 10^{-4}$
Calcium (20)	Ca-45		$9 \times 10^{-5}$
	Ca-47		$5 \times 10^{-4}$
Carbon (6)	C-14	$1 \times 10^{-6}$	$8 \times 10^{-3}$
Cerium (58)	Ce-141		$9 \times 10^{-4}$
	Ce-143		$4 \times 10^{-4}$
	Ce-144		$1 \times 10^{-4}$
Cesium (55)	Cs-131		$2 \times 10^{-2}$
	Cs-134m		$6 \times 10^{-2}$
	Cs-134		$9 \times 10^{-5}$

\* Values are given in Column I only for those materials normally used in gases.

\*\* FCi/gm for solids.

		Column I	Column II
Element (atomic number)	Isotope	Gas Concentration FCi/ml*	Liquid and Solid Concentration FCi/ml**
Chlorine (17)	Cl-38	$9 \times 10^{-7}$	$4 \times 10^{-3}$
Chromium (24)	Cr-51		$2 \times 10^{-2}$
Cobalt (27)	Co-57		$5 \times 10^{-3}$
	Co-58		$1 \times 10^{-3}$
	Co-60		$5 \times 10^{-4}$
Copper (29)	Cu-64	$2 \times 10^{-6}$	$3 \times 10^{-3}$
Dysprosium (66)	Dy-165		$4 \times 10^{-3}$
	Dy-166		$4 \times 10^{-4}$
Erbium (68)	Er-169		$9 \times 10^{-4}$
	Er-171		$1 \times 10^{-3}$
Europium (63)	Eu-152 (T/2=9.2 h)		$6 \times 10^{-4}$
	Eu-155		$2 \times 10^{-3}$
Fluorine (9)	F-18		$8 \times 10^{-3}$
Gadolinium (64)	Gd-153		$2 \times 10^{-3}$
	Gd-159		$8 \times 10^{-4}$
Gallium (31)	Ga-72	$5 \times 10^{-6}$	$4 \times 10^{-4}$
Germanium (32)	Ge-71		$2 \times 10^{-2}$
Gold (79)	Au-196		$2 \times 10^{-3}$
	Au-198		$5 \times 10^{-4}$
	Au-199		$2 \times 10^{-3}$
Hafnium (72)	Hf-181		$7 \times 10^{-4}$
Hydrogen (1)	H-3		$3 \times 10^{-2}$
Indium (49)	In-113m		$1 \times 10^{-2}$
	In-114m		$2 \times 10^{-4}$
Iodine (53)	I-126	$3 \times 10^{-9}$	$2 \times 10^{-5}$
	I-131	$3 \times 10^{-9}$	$2 \times 10^{-5}$
	I-132	$8 \times 10^{-8}$	$6 \times 10^{-4}$
	I-133	$1 \times 10^{-8}$	$7 \times 10^{-5}$
	I-134	$2 \times 10^{-7}$	$1 \times 10^{-3}$

\* Values are given in Column I only for those materials normally used in gases.

\*\* FCi/gm for solids.

Element (atomic number)	Isotope	Column I	Column II
		Gas Concentration FCi/ml*	Liquid and Solid Concentration FCi/ml**
Iridium (77)	Ir-190		$2 \times 10^{-3}$
	Ir-192		$4 \times 10^{-4}$
	Ir-194		$3 \times 10^{-4}$
Iron (26)	Fe-55		$8 \times 10^{-3}$
	Fe-59		$6 \times 10^{-4}$
Krypton (36)	Kr-85m	$1 \times 10^{-6}$	
	Kr-85	$3 \times 10^{-6}$	
Lanthanum (57)	La-140		$2 \times 10^{-4}$
Lead (82)	Pb-203		$4 \times 10^{-3}$
Lutetium(71)	Lu-177		$1 \times 10^{-3}$
Manganese (25)	Mn-52		$3 \times 10^{-4}$
	Mn-54		$1 \times 10^{-3}$
	Mn-56		$1 \times 10^{-3}$
Mercury (80)	Hg-197m		$2 \times 10^{-3}$
	Hg-197		$3 \times 10^{-3}$
	Hg-203		$2 \times 10^{-4}$
Molybdenum (42)	Mo-99		$2 \times 10^{-3}$
Neodymium (60)	Nd-147		$6 \times 10^{-4}$
	Nd-149		$3 \times 10^{-3}$
Nickel (28)	Ni-65		$1 \times 10^{-3}$
Niobium (Columbium) (41)	Nb-95		$1 \times 10^{-3}$
	Nb-97		$9 \times 10^{-3}$
Osmium(76)	Os-185		$7 \times 10^{-4}$
	Os-191m		$3 \times 10^{-2}$
	Os-191		$2 \times 10^{-3}$
	Os-193		$6 \times 10^{-4}$
Palladium (46)	Pd-103		$3 \times 10^{-3}$
	Pd-109		$9 \times 10^{-4}$
Phosphorus (15)	P-32		$2 \times 10^{-4}$

\* Values are given in Column I only for those materials normally used in gases.

\*\* FCi/gm for solids.

		Column I	Column II
Element (atomic number)	Isotope	Gas Concentration FCi/ml*	Liquid and Solid Concentration FCi/ml**
Platinum (78)	Pt-191		$1 \times 10^{-3}$
	Pt-193m		$1 \times 10^{-2}$
	Pt-197m		$1 \times 10^{-2}$
	Pt-197		$1 \times 10^{-3}$
Polonium (84)	Po-210		$7 \times 10^{-6}$
Potassium (19)	K-42		$3 \times 10^{-3}$
Praseodymium (59)	Pr-142		$3 \times 10^{-4}$
	Pr-143		$5 \times 10^{-4}$
Promethium (61)	Pm-147		$2 \times 10^{-3}$
	Pm-149		$4 \times 10^{-4}$
Radium (88)	Ra-226		$1 \times 10^{-7}$
	Ra-228		$3 \times 10^{-7}$
Rhenium (75)	Re-183		$6 \times 10^{-3}$
	Re-186		$9 \times 10^{-4}$
	Re-188		$6 \times 10^{-4}$
Rhodium (45)	Rh-103m		$1 \times 10^{-1}$
	Rh-105		$1 \times 10^{-3}$
Rubidium (37)	Rb-86		$7 \times 10^{-4}$
Ruthenium (44)	Ru-97		$4 \times 10^{-3}$
	Ru-103		$8 \times 10^{-4}$
	Ru-105		$1 \times 10^{-3}$
	Ru-106		$1 \times 10^{-4}$
Samarium (62)	Sm-153		$8 \times 10^{-4}$
Scandium (21)	Sc-46		$4 \times 10^{-4}$
	Sc-47		$9 \times 10^{-4}$
	Sc-48		$3 \times 10^{-4}$
Selenium (34)	Se-75		$3 \times 10^{-3}$
Silicon (14)	Si-31		$9 \times 10^{-3}$

\* Values are given in Column I only for those materials normally used in gases.

\*\* FCi/gm for solids.

		Column I	Column II
Element (atomic number)	Isotope	Gas Concentration FCi/ml*	Liquid and Solid Concentration FCi/ml**
Silver (47)	Ag-105	9 x 10 <sup>-8</sup>	1 x 10 <sup>-3</sup>
	Ag-110m		3 x 10 <sup>-4</sup>
	Ag-111		4 x 10 <sup>-4</sup>
Sodium (11)	Na-24		2 x 10 <sup>-3</sup>
Strontium (38)	Sr-85		1 x 10 <sup>-3</sup>
	Sr-89		1 x 10 <sup>-4</sup>
	Sr-91		7 x 10 <sup>-4</sup>
	Sr-92		7 x 10 <sup>-4</sup>
Sulfur (16)	S-35		6 x 10 <sup>-4</sup>
Tantalum (73)	Ta-182		4 x 10 <sup>-4</sup>
Technetium (43)	Tc-96m		1 x 10 <sup>-1</sup>
	Tc-96		1 x 10 <sup>-3</sup>
Tellurium (52)	Te-125m		2 x 10 <sup>-3</sup>
	Te-127m		6 x 10 <sup>-4</sup>
	Te-127		3 x 10 <sup>-3</sup>
	Te-129m		3 x 10 <sup>-4</sup>
	Te-131m		6 x 10 <sup>-4</sup>
	Te-132		3 x 10 <sup>-4</sup>
Terbium (65)	Tb-160		4 x 10 <sup>-4</sup>
Thallium (81)	Tl-200		4 x 10 <sup>-3</sup>
	Tl-201		3 x 10 <sup>-3</sup>
	Tl-202		1 x 10 <sup>-3</sup>
	Tl-204		1 x 10 <sup>-3</sup>
Thulium (69)	Tm-170		5 x 10 <sup>-4</sup>
	Tm-171		5 x 10 <sup>-3</sup>
Tin (50)	Sn-113		9 x 10 <sup>-4</sup>
	Sn-125		2 x 10 <sup>-4</sup>
Tungsten (Wolfram) (74)	W-181		4 x 10 <sup>-3</sup>
	W-187		7 x 10 <sup>-4</sup>

\* Values are given in Column I only for those materials normally used in gases.

\*\* FCi/gm for solids.

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Element (atomic number)	Isotope	Column I	Column II
		Gas Concentration FCi/ml*	Liquid and Solid Concentration FCi/ml**
Vanadium (23)	V-48		$3 \times 10^{-4}$
Xenon (54)	Xe-131m	$4 \times 10^{-6}$	
	Xe-133	$3 \times 10^{-6}$	
	Xe-135	$1 \times 10^{-6}$	
Ytterbium (70)	Yb-175		$1 \times 10^{-3}$
Yttrium (39)	Y-90		$2 \times 10^{-4}$
	Y-91m		$3 \times 10^{-2}$
	Y-91		$3 \times 10^{-4}$
	Y-92		$6 \times 10^{-4}$
	Y-93		$3 \times 10^{-4}$
Zinc (30)	Zn-65		$1 \times 10^{-3}$
	Zn-69m		$7 \times 10^{-4}$
	Zn-69		$2 \times 10^{-2}$
Zirconium (40)	Zr-95		$6 \times 10^{-4}$
	Zr-97		$2 \times 10^{-4}$
Beta and/or gamma emitting radioactive material not listed above with half-life less than 3 years		$1 \times 10^{-10}$	$1 \times 10^{-6}$

NOTE: Many radioisotopes disintegrate into isotopes that are also radioactive. In expressing the concentrations in this paragraph, the activity stated is that of the parent isotope and takes into account the daughters.

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\* Values are given in Column I only for those materials normally used in gases.

\*\* FCi/gm for solids.

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NOTE 2: For purposes of subsection (d) of this section where there is involved a combination of isotopes, the limit for the combination should be derived as follows: Determine for each isotope in the product the ratio between the concentration present in the product and the exempt concentration established in this paragraph for the specific isotope when not in combination. The sum of such ratios may not exceed "1" (i.e., unity).

EXAMPLE:

$$\frac{\text{Concentration of Isotope A in Product}}{\text{Exempt Concentration of Isotope A}} +$$

$$\frac{\text{Concentration of Isotope B in Product}}{\text{Exempt Concentration of Isotope B}} \# 1$$



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<u>Radioactive Material</u>	<u>Microcuries</u>
Antimony-122 (Sb-122)	100
Antimony-124 (Sb-124)	10
Antimony-125 (Sb-125)	10
Arsenic-73 (As-73)	100
Arsenic-74 (As-74)	10
Arsenic-76 (As-76)	10
Arsenic-77 (As-77)	100
Barium-131 (Ba-131)	10
Barium-133 (Ba-133)	10
Barium-140 (Ba-140)	10
Beryllium-7 (Be-7)	100
Bismuth-210 (Bi-210)	1
Bromine-82 (Br-82)	10
Cadmium-109 (Cd-109)	10
Cadmium-115m (Cd-115m)	10
Cadmium-115 (Cd-115)	100
Calcium-45 (Ca-45)	10
Calcium-47 (Ca-47)	10
Carbon-14 (C-14)	100
Cerium-141 (Ce-141)	100
Cerium-143 (Ce-143)	100
Cerium-144 (Ce-144)	1
Cesium-129 (Cs-129)	100
Cesium-131 (Cs-131)	1,000
Cesium-134m (Cs-134m)	100
Cesium-134 (Cs-134)	1
Cesium-135 (Cs-135)	10
Cesium-136 (Cs-136)	10
Cesium-137 (Cs-137)	10
Chlorine-36 (Cl-36)	10
Chlorine-38 (Cl-38)	10
Chromium-51 (Cr-51)	1,000
Cobalt-57 (Co-57)	100
Cobalt-58m (Co-58m)	10
Cobalt-58 (Co-58)	10
Cobalt-60 (Co-60)	1
Copper-64 (Cu-64)	100
Dysprosium-165 (Dy-165)	10

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<u>Radioactive Material</u>	<u>Microcuries</u>
Dysprosium-166 (Dy-166)	100
Erbium-169 (Er-169)	100
Erbium-171 (Er-171)	100
Europium-152 (Eu-152) 9.2h	100
Europium-152 (Eu-152) 13y	1
Europium-154 (Eu-154)	1
Europium-155 (Eu-155)	10
Fluorine-18 (F-18)	1,000
Gadolinium-153 (Gd-153)	10
Gadolinium-159 (Gd-159)	100
Gallium-67 (Ga-67)	100
Gallium-72 (Ga-72)	10
Germanium-68 (Ge-68)	10
Germanium-71 (Ge-71)	100
Gold-195 (Au-195)	10
Gold-198 (Au-198)	100
Gold-199 (Au-199)	100
Hafnium-181 (Hf-181)	10
Holmium-166 (Ho-166)	100
Hydrogen-3 (H-3)	1,000
Indium-111 (In-111)	100
Indium-113m (In-113m)	100
Indium-114m (In-114m)	10
Indium-115m (In-115m)	100
Indium-115 (In-115)	10
Iodine-123 (I-123)	100
Iodine-125 (I-125)	1
Iodine-126 (I-126)	1
Iodine-129 (I-129)	0.1
Iodine-131 (I-131)	1
Iodine-132 (I-132)	10
Iodine-133 (I-133)	1
Iodine-134 (I-134)	10
Iodine-135 (I-135)	10
Iridium-192 (Ir-192)	10
Iridium-194 (Ir-194)	100
Iron-52 (Fe-52)	10
Iron-55 (Fe-55)	100
Iron-59 (Fe-59)	10
Krypton-85 (Kr-85)	100

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<u>Radioactive Material</u>	<u>Microcuries</u>
Krypton-87 (Kr-87)	10
Lanthanum-140 (La-140)	10
Lutetium-177 (Lu-177)	100
Manganese-52 (Mn-52)	10
Manganese-54 (Mn-54)	10
Manganese-56 (Mn-56)	10
Mercury-197m (Hg-197m)	100
Mercury-197 (Hg-197)	100
Mercury-203 (Hg-203)	10
Molybdenum-99 (Mo-99)	100
Neodymium-147 (Nd-147)	100
Neodymium-149 (Nd-149)	100
Nickel-59 (Ni-59)	100
Nickel-63 (Ni-63)	10
Nickel-65 (Ni-65)	100
Niobium-93m (Nb-93m)	10
Niobium-95 (Nb-95)	10
Niobium-97 (Nb-97)	10
Osmium-185 (Os-185)	10
Osmium-191m (Os-191m)	100
Osmium-191 (Os-191)	100
Osmium-193 (Os-193)	100
Palladium-103 (Pd-103)	100
Palladium-109 (Pd-109)	100
Phosphorus-32 (P-32)	10
Platinum-191 (Pt-191)	100
Platinum-193m (Pt-193m)	100
Platinum-193 (Pt-193)	100
Platinum-197m (Pt-197m)	100
Platinum-197 (Pt-197)	100
Polonium-210 (Po-210)	0.1
Potassium-42 (K-42)	10
Potassium-43 (K-43)	10
Praseodymium-142 (Pr-142)	100
Praseodymium-143 (Pr-143)	100
Promethium-147 (Pm-147)	10
Promethium-149 (Pm-149)	10
Radon-222 (Rn-222)	100
Rhenium-186 (Re-186)	100
Rhenium-188 (Re-188)	100

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<u>Radioactive Material</u>	<u>Microcuries</u>
Rhodium-103m (Rh-103m)	100
Rhodium-105 (Rh-105)	100
Rubidium-81 (Rb-81)	10
Rubidium-86 (Rb-86)	10
Rubidium-87 (Rb-87)	10
Ruthenium-103 (Ru-103)	100
Ruthenium-97 (Ru-97)	10
Ruthenium-105 (Ru-105)	10
Ruthenium-106 (Ru-106)	1
Samarium-151 (Sm-151)	10
Samarium-153 (Sm-153)	100
Scandium-46 (Sc-46)	10
Scandium-47 (Sc-47)	100
Scandium-48 (Sc-48)	10
Selenium-75 (Se-75)	10
Silicon-31 (Si-31)	100
Silver-105 (Ag-105)	10
Silver-110m (Ag-110m)	1
Silver-111 (Ag-111)	100
Sodium-22 (Na-22)	10
Sodium-24 (Na-24)	10
Strontium-85 (Sr-85)	10
Strontium-87m (Sr-87m)	10
Strontium-89 (Sr-89)	1
Strontium-90 (Sr-90)	0.1
Strontium-91 (Sr-91)	10
Strontium-92 (Sr-92)	10
Sulphur-35 (S-35)	100
Tantalum-182 (Ta-182)	10
Technetium-96 (Tc-96)	10
Technetium-97m (Tc-97m)	100
Technetium-97 (Tc-97)	100
Technetium-99m (Tc-99m)	100
Technetium-99 (Tc-99)	10
Tellurium-125m (Te-125m)	10
Tellurium-127m (Te-127m)	10
Tellurium-127 (Te-127)	100
Tellurium-129m (Te-129m)	10
Tellurium-129 (Te-129)	100
Tellurium-131m (Te-131m)	10

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<u>Radioactive Material</u>	<u>Microcuries</u>
Tellurium-132 (Te-132)	10
Terbium-160 (Tb-160)	10
Thallium-200 (Tl-200)	100
Thallium-201 (Tl-201)	100
Thallium-202 (Tl-202)	100
Thallium-204 (Tl-204)	10
Thulium-170 (Tm-170)	10
Thulium-171 (Tm-171)	10
Tin-113 (Sn-113)	10
Tin-125 (Sn-125)	10
Tungsten-181 (W-181)	10
Tungsten-185 (W-185)	10
Tungsten-187 (W-187)	100
Vanadium-48 (V-48)	10
Xenon-131m (Xe-131m)	1,000
Xenon-133 (Xe-133)	100
Xenon-135 (Xe-135)	100
Ytterbium-175 (Yb-175)	100
Yttrium-87 (Y-87)	10
Yttrium-88 (Y-88)	10
Yttrium-90 (Y-90)	10
Yttrium-91 (Y-91)	10
Yttrium-92 (Y-92)	100
Yttrium-93 (Y-93)	100
Zinc-65 (Zn-65)	10
Zinc-69m (Zn-69m)	100
Zinc-69 (Zn-69)	1,000
Zirconium-93 (Zr-93)	10
Zirconium-95 (Zr-95)	10
Zirconium-97 (Zr-97)	10
Any radioactive material not listed above other than alpha emitting radioactive material	0.1